REQUEST FOR EXTENSION OF TIME

Applicant hereby requests an extension of time of one month to respond to the non-final Office Action of April 6, 2005. A check in the amount of $120.00 is enclosed. Authorization is given to charge any additional amounts, or refund any overpayments to Account No. 05-1060.

REMARKS

Before discussing the pending claims and the current amendments to the claims, applicant will review the wheel disclosed in the *Brittain, et al.* '363 patent ("*Brittain*") and its shortcomings. Applicant will then discuss how the present invention addresses these shortcomings. Finally, applicant will indicate specifically where novelty and patentable subject matter resides in the pending claims.

Brittain, et al.

As the Examiner has already recognized, *Brittain* discloses two separate side wheel sections which are welded or otherwise fastened together (the disclosure is not clear on this point). Each wheel section includes inner and outer annular flanges or hoops 40, 42. The wheel hub of *Brittain* includes two halves which combine to form a hub which extends axially the entire width of the track. The wheel half sections are

mirror images of each other such that only one need be described for an understanding of *Brittain*.

Each wheel half section fastens the two hoops 40, 42 secured together by a series of welds with radial reinforcing members designated 44 and best seen in FIG. 3. There are eight such radial reinforcing members in each wheel half. The end surfaces of each of the radial reinforcing members 44 is welded to the adjacent side of one of the annular hoops 40, 42.

Thus, the sequence of steps, for only one wheel half section of *Brittain* requires sixteen individual welds while securing the two hoops in axial alignment. In addition, the inner surface of lateral or circumferential mounting plates 46 must be welded to the outer cylindrical edges of both hoops 40, 42. FIG. 3 shows twenty-four such circumferential mounting plates 46. For each wheel half section, because each circumferential plate 46 also requires two individual welds, an additional 48 welds are required for each wheel half.

After both wheel half sections are thus fabricated, they must then be welded to the outer surfaces of cylindrical flanges (unnumbered) which in turn are welded (presumably) to the outer cylindrical edge of the two hub plates 34, 36 (which themselves would undoubtedly be welded together for strength). Additional welding is required to mount the inner circular flanges 40 to the unnumbered cylindrical flanges.

The Examiner will appreciate from the above description that the manufacture of the *Brittain* wheel is difficult at best, and highly labor intensive and, therefore, expensive.

Further, for the *Brittain* structure, it is difficult to manufacture the outer cylindrical support surface for the track because the radial dimension from the axis of rotation to the outer track-engaging surface of the frictional engagement elements 50 must be held to tolerance. To maintain this dimension accurately, the outer surfaces of the elements 50 would have to be machined after the wheel is fully fabricated. However, any machining operation on those surfaces would be difficult because an interrupted cut is created as the cutting tool leaves one solid element and then traverse the space between adjacent elements 50, thus causing considerable shock for each such traverse, which creates vibration damaging to the equipment, as persons skilled in the art would appreciate.

However, these three are not the only shortcomings of the *Brittain* wheel. It is difficult to repair one of the wheels of *Brittain* in the field. It will be understood that due to the environment in which these heavy machines work, it is not unusual to damage one of the track wheels, particularly in view of the nature of the equipment, which is very heavy, and the type of work it is intended to perform. Briefly, in order to repair one of the wheels of *Brittain,* the entire wheel must be removed. First, the tension on the track must be reduced, the machine must be raised at least on one side, and the

wheel removed from its drive shaft. Even then, however, the damaged portion may have to be removed and repaired which is also highly intensive of skilled technical personnel, producing long delays, during which the machine is out of service, unless a spare wheel is available to replace the damaged wheel.

The present invention, on the other hand, permits a repair person to simply move the machine until a damaged segment is moved out of the area where it engages the track so that the damaged segment or segments may be removed simply by removing two mounting bolts and replacing without removing the wheel or effecting the radial location of other track-supporting segments. Each replacement segment is accurately located on the hub due to the machined surfaces on the circumference and sides of the disc-shaped hub, and corresponding machined surfaces on the replacement segment.

In view of the above, the advantages of the present invention will be readily understood. These advantages flow primarily, it is submitted, from the use of a single disc-like hub plate to which are mounted a plurality of identical cast segments. The hub plate has an outer cylindrical surface which engages and supports locator surfaces on the individual cast segments so that all segments are located at an equal distance from the axis of rotation, with comparatively little machining on the outer cylindrical surface of the hub and on the smaller engaging surfaces on each cast segment. Moreover, the

lateral or radially extending surfaces of the outer disc-shape portion of the hub provides axial alignment for the individual segments.

Thus, with the present invention, not only is the assembly time reduced, but it is not necessary to weld two separate hub sections, nor to weld any of the track support surfaces to the hub. Each mounting bolt helps to secure cast segments on opposing sides of the hub plate.

An important distinction and feature of the invention, thus, is the provision of a hub plate which extends radially of the axis of rotation and is substantially more narrow than the width of the track or wheel (see FIG. 14, for example) to serve as the primary reference member. There simply is no such corresponding structure or elements suggested or disclosed in the *Brittain, et al.* reference. Applicant respectfully submits that the Examiner has picked surfaces from *Brittain, et al.* without regard to the fundamental principal that prior art must be considered in its entirety - not dissected and pasted together without regard to what is in fact suggested by the reference.

Turning now to the independent claims, as amended, claim 1 recites that the hub includes a "disc-shaped mounting member having a width substantially less than the width of said track and extending generally perpendicular to an axis of rotation of said hub". No such structure is shown or suggested in the *Brittain* reference. Claim 1 goes on to recite that the hub provides a "circumferential contact surface of uniform spacing from the axis of rotation", as well as two lateral mounting surfaces "on opposing sides

of said mounting member". No such structure is taught or disclosed in *Brittain, et al.* Claim 1 further recites that the wheel segments have a first locater surface "for contacting said circumferential contact surface of said hub for locating said segment in a radial direction". The Examiner cites the elements 46 of *Brittain, et al.* as providing lateral (circumferential) contact surfaces. However, these elements are welded to the outer circumferential surfaces of two thin flanges 40, 42 on each side or half section of the *Brittain, et al.* wheel.

Similar limitations are found in amended claim 16 which, it is respectfully submitted, defines patentable subject. Moreover, amended claim 16 recites that each cast metal segment includes a base engaging one of the side mounting surfaces of the mounting member and a plurality of "circumferentially spaced support elements, each having a belt-engaging surface, and cooperating to form support for said belt". This structure is not suggested even remotely in *Brittain, et al.* Amended claim 16 also recites threaded fasteners for removably mounting "said segments to upright mounting surfaces of said mounting member". Again, not only is this quoted structure novel, but for the reasons set out above, it defines patentable subject matter under Section 103.

Claim 23 was indicated as being allowable in the original Office Action. However, amendments have been made to claim 23, which is directed to the cast metal segment *per se*, in order to more particularly define the invention set out in claim 23.

Nowhere does *Brittain* even suggest a "cast metal segment", which was apparently recognized by the Examiner in the original allowance of claim 23.

Claim 24, it is respectfully submitted, also defines patentable subject matter in that it recites a hub including "a disc having a thickness substantially less than a width of said track" and extending radially outwardly of an axis of rotation of the hub. Claim 24 also recites that each segment mounted to the hub engages one side surface of the disc, and that each segment provides a plurality of spaced support elements for engaging the belt to form a cylindrical support for the belt, and threaded fasteners for removably mounting the segments "to radial sides of said disc". Again, it is respectfully submitted that the structure recited in claim 24 is neither taught nor suggested in *Brittain, et al.*

Applicant respectfully submits that all the pending claims are allowable; a favorable action is respectfully submitted.

Respectfully submitted,

Dated: July 22 2005

James J. Hill
Reg. No. 24,287
EMRICH & DITHMAR LLC
125 South Wacker Dr., Ste. 2080
Chicago, IL 60606-6721
Telephone (312) 606-2106
Fax (312) 663-9822